



RESOURCE AND PATIENT MANAGEMENT SYSTEM

Laboratory (LR) Electronic Signature Enhancement

INSTALLATION GUIDE AND RELEASE NOTES

**Version 5.2, Patch 13
September 2002**

**Information Technology Support Center
Division of Information Resources
Albuquerque, New Mexico**

PREFACE

Purpose of the Installation Guide

This document describes how to install the RPMS Lab Electronic Signature modification V. 5.2, Patch 13, and describes the new functionality that the RPMS system gains with the RPMS Lab Electronic Signature modification V. 5.2, Patch 13.

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1.0 RELEASE NOTES

1.1 Overview

The RPMS Lab Electronic Signature modification, Version 5.2, Patch 13 provides new functionality on lab results. This software will provide the ability to do the following:

- Alert the physician of lab results that need to be signed as soon as the physician logs on to the system.
- Allow for the physician to temporarily or permanently reassign their workload to another provider.
- Audit users who are viewing patient results.
- Archive audit results from the system.

1.2 New Functionality

- When the participating provider signs on to the system, they will be alerted to any lab results that need to be reviewed and signed.
- If the participating provider is going to be out of the office for a day or more, they can assign their lab results to another participating provider. This is referred to as a surrogate provider. A surrogate provider can be set up for a date range.
- There have been auditing capabilities added to track users of the system. A report was added that will show what employee looked up what patient and by what menu option they accessed patient lab results.
- Auditing capabilities, (including reports) are part of this release, which allow administrators to track who is using the system, and what patient lab data they are accessing.

The events that trigger a lab result alert are as follows:

- Verification of General Laboratory lab results
- Modification of verified General laboratory lab results
- Preliminary Microbiology result report
- Final Microbiology result report

1.3 Requirements to Install

The individual must be able to perform the following activities in order to proceed with the install:

- Have the programmer security key
- Have rights to the System Manager Menu option
- Add Menu Options to Kernel
- Be able to backup Mumps routines (%RS)
- Edit a Mumps routine

2.0 Installation Notes

PREFIX: LR, BLR, BLRA

CURRENT VERSION: 5.2 PATCH 13

Warning: Read entire notes file prior to attempting any installation.

2.1 General Information

- Make a copy of this distribution for off-line storage.
- Print all notes/readme files.
- If you received this distribution on tape media please remember to return the tape to the originator.
- It is recommended that the terminal output during the installation be captured using an auxport printer attached to the terminal at which you are performing the software installation. This will insure a printed audit trail should any problems arise.

2.2 Namespace

This package will be appended to the existing lab modules, including:

IHS LABORATORY	Namespace: BLR
LAB SERVICE	Namespace: LR

2.3 Package Dependencies

Installation of the following packages must be accomplished for RPMS Lab Electronic Signature modification to function properly.

- VA Kernel, V 8.0 or higher
- VA FileMan, V 21.0 or higher
- Lab Service, V 5.2, Patches 1- 12

2.4 Contents of Distribution

- lr__0520.13k KIDS file
- lr__0520.13i.pdf Installation guide (revised for patch 13)
- lr__0520.13t.pdf Technical manual (revised for patch 13)

- lr__0520.13u.pdf User manual (revised for patch 13)

2.5 Required RPMS Resources (minimum software)

- VA Kernel V 8.0 or higher
- VA FileMan V 21.0 or higher
- MailMan V 7.1 or higher
- The following RPMS Modules (Post Y2K or higher)
 - BLR IHS Laboratory, Version 5.2, Patches 1- 12
 - LR Lab Service, Version 5.2, Patches 1- 12
 - GIS V 3.01, Patch 1
 - APCD V 2.0, Patch 4

2.6 File Range

The RPMS Lab Electronic Signature enhancement was assigned a file number range. Additional fields were added to the Lab Result File (#63) but the field numbers assigned are such a number as to not interfere with the normal lab package field numbers. The node where the data is filed is the same as the file number, 9009027.

BLRA (Lab Electronic Signature): 9009027 - 9009027.999

2.7 Global Placement/Description

The RPMS Lab Electronic Signature enhancement will add a new global to the RPMS system, BLRALAB. This global is subscripted by the file number.

3.0 Pre-Installation Requirements

The minimum hardware and software requirements (see Section 2.5) must be met on the RPMS system before the RPMS Lab Electronic Signature Enhancement Version 5.2, Patch 13 can be installed.

3.1 Overview

The Lab Electronic Signature Enhancement installation adds new functionality to the existing Lab Service module. Physicians who elect to be participants of this enhancement will be alerted to lab results that need to be reviewed when they sign onto the RPMS system. In order to receive these alerts and be able to review the lab results, physicians will need to be set up properly after installation.

Additional changes have been made to the Lab package that are unrelated to the electronic signature enhancement. A list of these can be found in Appendices A and B. It is recommended Appendix A be provided to the Lab supervisor.

3.2 RPMS Modules

Verify that minimum requirements, as listed in section 2.5 of this document, have been met.

3.3 Participating Physicians

There are two kinds of participating physicians; supervisors and non-supervisors. It is important to pre-identify the participating physicians and their physician type prior to installation. This will help for the post-installation set up. Please contact the Clinical Director or other chief physician to obtain this list. It may be necessary to explain to the participating physicians how to set up and use their electronic signatures if they have never done so before.

4.0 Installation

The estimated time to install the RPMS Lab Electronic Signature modification Version 5.2, Patch 13 is less than 5 minutes. Do not continue unless the RPMS software is backed up.

WARNING: The Electronic Signature Enhancement must not be turned on until the site manager and/or lab manager has attended training on setting up and using the software. If you are installing this and neither your site manager nor lab manager have attended the training, you must stop the installation process when prompted and contact the ITSC training coordinator at (505) 248-4214 or trainingweb@mail.ihs.gov.

Steps to be performed:

1. Use %RS to save off all LR* and BLR* routines. Use %GS to save the ^LAB(62.07 global.

Note: You do not have to save LRINI* routines. These can be deleted AFTER a successful installation has been verified (one week after install).

2. Access Kernel Installation & Distribution System (KIDS)
3. Load a Distribution
4. Verify Checksums in Transport Global
5. Print Transport Global
6. Install Package

4.1 Installation

How to access the Kernel Installation & Distribution System

```
Select OPTION NAME: EVE                      Systems Manager Menu
Core Applications ...
Device Management ...
FM  VA FileMan ...
Manage Mailman ...
Menu Management ...
Programmer Options ...
Operations Management ...
Spool Management ...
System Security ...
Task Manager ...
Taskman Management ...
User Management ...
Application Utilities ...
Capacity Management ...
```

```

Select Systems Manager Menu Option: PROgrammer Options
  KIDS   Kernel Installation & Distribution System ...
  PG     Programmer mode
         Delete Unreferenced Options
         Error Processing ...
         Global Block Count
         List Global
         Routine Tools ...

Select Programmer Options Option: KIDS Kernel Installation & Distribution System
  Edits and Distribution ...
  Utilities ...
  Installation ...

Select Kernel Installation & Distribution System Option: Installation
  Load a distribution
  Verify Checksums in Transport Global
  Print Transport Global
  Compare Transport Global to Current System
  Backup a Transport Global
  Install Package(s)
  Restart Install of Package(s)
  Unload a Distribution
Select Installation Option:

```

4.2 Load a Distribution

```

1      Load a Distribution
2      Verify Checksums in Transport Global
3      Print Transport Global
4      Compare Transport Global to Current System
5      Backup a Transport Global
6      Install Package(s)
       Restart Install of Package(s)
       Unload a Distribution

Select Installation Option: 1 Load a Distribution
Enter a Host File: lr__0520.13k
KIDS Distribution saved on Aug 09, 2001@15:08:38

Comment: LR Lab Electronic Signature Enhancement Version 5.2, Patch 13
This Distribution contains Transport Globals for the following Package(s):
LR*5.2*1013

Want to Continue with Load? YES// YES
Loading Distribution...

LR*5.2*1013
Use INSTALL NAME: LR*5.2*1013 to install this Distribution.

```

4.3 Verify Checksums in Transport Global

```
Select Installation Option: 2 Verify Checksums in Transport Global
Select INSTALL NAME:      LR*5.2*1013      Loaded from Distribution Loaded from
Distribution
8/9/01@15:15:39
```

```
LR Lab Electronic Signature Enhancement Version 5.2, Patch 13 ;created on Aug
09, 2001 @15:08:38
DEVICE: HOME//
```

```
PACKAGE: LR*5.2*1013      Aug 09, 2001 3:15 pm      PAGE 1
```

```
-----
448 Routine checked, 0 failed.
```

4.4 Print Transport Global

NOTE: Your printout may differ from the example below.

```
Select Installation Option: 3 Print Transport Global
Select INSTALL NAME: LR*5.2*1013      Loaded from Distribution      Loaded
from Distribution => 8/9/01@15:15:39
DEVICE: HOME//
```

```
PACKAGE: LR*5.2*1013      Aug 09, 2001 3:16 pm      PAGE 1
```

```
-----
TYPE: SINGLE PACKAGE
TRACK NATIONALLY: NO
NATIONAL PACKAGE: IHS LAB SERVICE
DESCRIPTION:
```

```
ENVIRONMENT CHECK :
PRE-INIT ROUTINE :
POST-INIT ROUTINE :
PRE-TRANSPORT RTN :
```

FILE #	NAME	UP DATE DD	SEND SEC. CODE	DATA COMES W/FILE	SITE DATA	RSLV PTS	USER OVER RIDE
63	LAB DATA	YES	YES	NO			
Partial DD: subDD: 63.04	fld: .9009022						
	fld: .9009023						
	fld: .9009024						
	fld: .9009025						
	fld: .9009026						
	fld: .9009027						
	fld: .9009028						
	fld: .9009029						
subDD: 63.05	fld: .9009023						
	fld: .9009024						

	fld: .9009025	
	fld: .9009026	
	fld: .9009027	
	fld: .9009028	
90		
90		
PRINT TEMPLATE:		
SORT TEMPLATE:		
BLRA LAB AUDIT DATE RANGE	FILE #9009027	SEND TO SITE
BLRA LAB AUDIT MENU	FILE #9009027	SEND TO SITE
INPUT TEMPLATE:		
ROUTINE:		
BLRAL1		SEND TO SITE
BLRAL3		SEND TO SITE
BLRAL4		SEND TO SITE
BLRALAC		SEND TO SITE
BLRALAF		SEND TO SITE
BLRALAU		SEND TO SITE
BLRALBA		SEND TO SITE
BLRALBD		SEND TO SITE
BLRALBL		SEND TO SITE
BLRALBM		SEND TO SITE
BLRALBM1		SEND TO SITE
BLRALBM2		SEND TO SITE
BLRALBM3		SEND TO SITE
BLRALBM4		SEND TO SITE
BLRALBR		SEND TO SITE
BLRALDR		SEND TO SITE
BLRALFN		SEND TO SITE
BLRALFN1		SEND TO SITE
BLRALPH		SEND TO SITE
BLRALPS		SEND TO SITE
BLRALRP		SEND TO SITE
BLRALS		SEND TO SITE
BLRALUT		SEND TO SITE
BLRALUT1		SEND TO SITE
BLRANTEG		SEND TO SITE
BLRAPPH		SEND TO SITE
OPTION:		
BLRA LAB AUDIT ARCHIVE		SEND TO SITE
BLRA LAB AUDIT REPORT		SEND TO SITE
BLRA LAB DELINQUENT RPT		SEND TO SITE
BLRA LAB ES PHYS DELETE		SEND TO SITE
BLRA LAB ES PHYSICIANS		SEND TO SITE
BLRA LAB REVIEW/SIGN RESULTS		SEND TO SITE
BLRA LAB SIGNED RPT		SEND TO SITE

SECURITY KEY:		
BLRACLRK		SEND TO SITE
BLRALAB		SEND TO SITE
BLRAPHY		SEND TO SITE
PROTOCOL:		
BLRA LAB RESULT DISPLAY ACTION MENU		SEND TO SITE
BLRA LAB RESULTS LIST ACTION MENU		SEND TO SITE
BLRA OTHER PROVIDER RESULTS		SEND TO SITE
BLRA PATIENT SORT		SEND TO SITE
BLRA REVIEW LAB RESULT		SEND TO SITE
BLRA SUBORDINATE PROVIDER RESULTS		SEND TO SITE
BLRAFORWARD		SEND TO SITE
BLRAFULL		SEND TO SITE
BLRANEXT		SEND TO SITE
BLRAOTHER		SEND TO SITE
BLRAREAS		SEND TO SITE
BLRASHOW		SEND TO SITE
LIST TEMPLATE:		
BLRA LAB RESULT DELINQ LIST		SEND TO SITE
BLRA LAB RESULT SIGN LIST		SEND TO SITE
BLRA LAB RESULTS LIST		SEND TO SITE
BLRASP		SEND TO SITE

4.5 Install Package

Before you install, you will be asked to verify that backups have been done. Toward the end of the install, you will be asked to add a coordinator to the new mail groups. We suggest that you enter the Site Manager's name at that time.

```
Select Installation Option: 6  Install Package(s)

from Distribution  8/9/01@15:15:39

on Aug 08, 2001 9:54 am
  This Distribution was loaded on Aug 09, 2001@15:08:38 with header of
  LR Lab Electronic Signature Enhancement Version 5.2, Patch 13  ;Created on Aug
  09

It consisted of the following Install(s):
LR*5.2*1013

  LR*5.2*1013

Install Questions for LR*5.2*1013

Incoming Files:

  63          LAB DATA  (Partial Definition)
Note:  You already have the 'LAB DATA' File.
```

9009027 BLRA LAB AUDIT

9009027.1 BLRA LAB PHYSICIANS

Want KIDS to Rebuild Menu Trees Upon Completion of Install? YES// NO

Want to DISABLE Scheduled Options, Menu Options, and Protocols? YES// NO

Enter the Device you want to print the Install messages.

You can queue the install by enter a 'Q' at the device prompt.

Enter a '^' to abort the install.

DEVICE: HOME//

Install Started for LR*5.2*1013 :

Installing Routines:

Installing Data Dictionaries:

Aug 09, 2001@15:18:46

Installing PACKAGE COMPONENTS:

Installing SECURITY KEY

Installing PRINT TEMPLATE

Installing SORT TEMPLATE

Installing INPUT TEMPLATE

Installing PROTOCOL

Located in the BLRA (IHS LAB ES) namespace.

Located in the BLRA (IHS LAB ES) namespace.

Located in the BLRA (IHS LAB ES) namespace.

Located in the BLRA (IHS LAB ES) namespace.

Located in the BLRA (IHS LAB ES) namespace.

Located in the BLRA (IHS LAB ES) namespace.

Located in the BLRA (IHS LAB ES) namespace.

Located in the BLRA (IHS LAB ES) namespace.

Located in the BLRA (IHS LAB ES) namespace.

Located in the BLRA (IHS LAB ES) namespace.

Installing LIST TEMPLATE

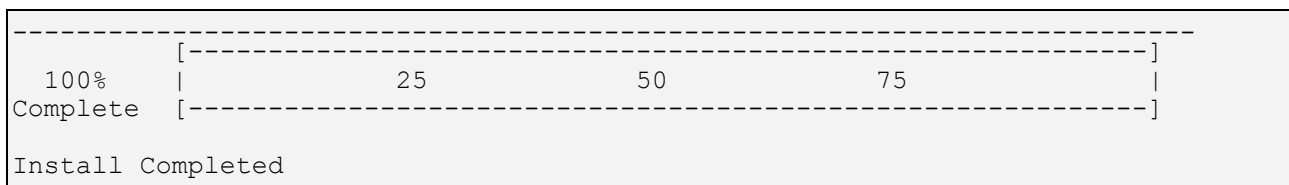
Installing OPTION

Aug 09, 2001@15:18:59

Updating Routine file...

Updating KIDS files...

LR*5.2*1013 Installed.



Stop Here!

If neither your site's site manager nor lab manager have attended training on setting up and using the electronic signature software enhancement, stop here. Please contact the ITSC training coordinator at (505) 248-4214 or trainingweb@mail.ihs.gov for information about training for the Electronic Signature enhancement. **The Electronic Signature enhancement must not be turned on** until your site's site manager and/ or lab manager has attended training on setting up and using the software. For your convenience, training classes will be taught at the Area offices.

5.0 Post-Installation

Before continuing with this section, all steps identified in Section 4.0 should have been successfully performed. Expect approximately 30 minutes or more to complete the post installation steps.

5.1 Overview

After the RPMS Lab Electronic Signature modification KIDS has been installed, the following manual adjustments must be made to insure proper installation and operation of the RPMS Lab Electronic Signature modification.

5.2 Allocating Security Keys

Security keys are included in the Lab Electronic Signature Enhancement package. This chart and section 5.2.1 should be used to assign security keys to the appropriate users.

Security Key	Description	Option with Key Lock	Option Menu Text
BLRAZCLRK	This key is required in order to enter or delete participating physicians.	BLRA LAB ES PHYSICIANS**	Enter/Edit/Re-activate Lab ESIG Physicians**NEW**
		BLRA LAB ES INACTIVATE PHYS	Inactivate Lab ESIG Physicians **NEW**
BLRAZLAB	Site Manager key for the Audit and Archive functions.	BLRA LAB AUDIT REPORT	Print Lab Audit Report
		BLRA LAB AUDIT ARCHIVE	Archive Lab ESIG Audit Data
		BLRA LAB ES SURR PHYS PURGE	Purge expired surrogate physicians for Lab ESIG
		BLRA PARAMETERS ENTER/EDIT	Lab Parameters Enter/Edit
BLRAZPHY	All participating physicians should be assigned this key.	BLRA LAB REVIEW/SIGN RESULTS	Review/Sign Lab Results **NEW**
		BLRA LAB SIGNED RPT	Signed Lab Results Report **NEW**
BLRAZSUP	A participating physician who has supervisory capability over other participating physicians should be assigned this key.	BLRA LAB DELINQUENT RPT	Delinquent Lab Results **NEW**

Note: The Enter/Edit/Re-Activate Lab ESIG Physicians option does not require the BLRAZCLRK security key. However, the option should ONLY be placed on the menu of the user who will maintain the participating physician file. The option may also be place in the users toolbox. In the TBOX submenu, participating physicians will have limited access to their own Lab ESIG participating physician record. This will allow physicians to designate their own surrogates and allow supervisors to edit the delinquent result date ranges. See section 5.3.1(Allocation Option to the User's Toolbox) for more details.

5.2.1 Security Key Delegation Procedures

```

Select OPTION NAME: EVE                      Systems Manager Menu
      Core Applications ...
      Device Management ...
FM    VA FileMan ...
      Manage Mailman ...
      Menu Management ...
      Programmer Options ...
      Operations Management ...
      Spool Management ...
      System Security ...
      Task Manager ...
      Taskman Management ...
      User Management ...
      Application Utilities ...
      Capacity Management ...

Select Systems Manager Menu Option: MENU Management
      Edit options
      Key Management ...
      Secure Menu Delegation ...
      Restrict Availability of Options
      Option Access By User
      List Options by Parents and Use
      Build Primary Menu Trees
      Fix Option File Pointers
      Help Processor ...
OPED  Screen-based Option Editor
      Display Menus and Options ...
      Out-Of-Order Set Management ...
      Show Users With Selected Primary or Secondary Menu

Select Menu Management Option: KEY Management

      Allocation of Security Keys
      De-allocation of Security Keys
      Enter/Edit of Security Keys
      All the Keys a User Needs
      Change user's allocated keys to delegated keys
      Delegate keys
      Keys For a Given Menu Tree
      List users holding a certain key
      Remove delegated keys
      Show the keys of a particular user

```

```

Select Key Management Option: ALL
  1    All the Keys a User Needs
  2    Allocation of Security Keys
CHOOSE 1-2: 2  Allocation of Security Keys

Allocate key: BLRAZCLRK
Another key:

Holder of key: RPMS
  1    RPMS,I          RPMS1          SITE MANAGER
  2    RPMS,II         RPMS2          SITE MANAGER
  3    RPMS,III        RPMS3          SITE MANAGER
CHOOSE 1-3: 3  RPMS,III          RPMS3          SITE MANAGER

Another holder:

You've selected the following keys:  BLRAZCLRK

You've selected the following holders:  RPMS,III

You are allocating keys.  Do you wish to proceed? YES//

BLRZCLRK being assigned to:
  RPMS,III

```

5.3 Allocating Options to Participating Physicians

Included in this installation is a routine, BLRAPPH. This routine was written to provide a simplified list of Providers and their Primary Menu Option for use in performing this post-installation setup.

```

[IHS,IHS]>D ^BLRAPPH

DEVICE: HOME//      {select any device to print to}

1      ADAM,ADAM          AZXAORPMSMENU      RPMS Applications
86     AHGOON,BARNEY      AZXAORPMSMENU      RPMS Applications
262    COSEN,JAKE R      AZXAORPMSMENU      RPMS Applications
251    FRANK,STUART      AKMOEVE          IHS Kernel
254    HASAN,NAJMUL      ADEMENU          Dental Data System
Menu
279    HOWELL,LYNN      AKMOCORE          IHS Core
232    JOHN,JIM          AZXAORPMSMENU      RPMS Applications
285    MAGEE,ANN          AZXAORPMSMENU      RPMS Applications
234    MEDLIN,BETTY J    AZXAORPMSMENU      RPMS Applications
45     MENDEZ,KATHY      AZXEKATHY         KATHY'S MENU
27     MINNICK,PHILIP    AZXAORPMSMENU      RPMS Applications
23     ROMERO,HARRIETTE  AZXAORPMSMENU      RPMS Applications
30     SATPATHI,S.M.     AZXAORPMSMENU      RPMS Applications
83     SMITH,SAM         AZXAORPMSMENU      RPMS Applications
26     STERN,LEE         AZXAORPMSMENU      RPMS Applications
77     STONE,SAM         AZXAORPMSMENU      RPMS Applications
19     TANNER,ROLAND D   AZXAORPMSMENU      RPMS Applications
160    TENNYSON,SHAWN    AKMOEVE          IHS Kernel
174    WADE,KAREN        AKMOEVE          IHS Kernel
226    WALDEN,HENRY A    AZXYHENRYSMENU     HENRY'S MENU
129    YAZZIE,YVONNE     AZXEYVONNE        YY'S MENU

```

```
[IHS,IHS]>
```

In the physician's primary menu, add the call to the alert message code in the **ENTRY ACTION** field so that when participating physicians sign on, they can see their alert messages about lab results to be reviewed.

```
Select Menu Management Option: EDIT options
```

```
Select OPTION to edit: [Type the Name of Your Physicians' Primary Menu]
```

```
NAME: AZXAORPMSMENU//
```

```
MENU TEXT: RPMS Applications//
```

```
PACKAGE:
```

```
OUT OF ORDER MESSAGE:
```

```
LOCK:
```

```
REVERSE/NEGATIVE LOCK:
```

```
DESCRIPTION:
```

```
1>
```

```
TYPE: menu//
```

```
HEADER:
```

```
ENTRY ACTION: D ALT^BLRALUT1      {alert message routine call}
```

```
EXIT ACTION:
```

To assign the new menu options we recommend the following configuration:

- Create a new option called [BLRA Lab ESIG Menu] and attach it to the provider's primary menu
- Add the following new options to the [BLRA Lab ESIG Menu] that you just created.

Reminder: These options are locked with specific security keys, and only users with the appropriate keys will actually see some of these options. Therefore, all options can be added to the menu given to all types of users.

- BLRA LAB ES PHYSICIANS
- BLRA LAB REVIEW/SIGN RESULTS
- BLRA LAB SIGNED RPT
- BLRA LAB DELINQUENT RPT

```
Select Systems Manager Menu Option: MENU Management
```

```
Edit options
```

```
Key Management ...
```

```
Secure Menu Delegation ...
```

```
Restrict Availability of Options
```

```
Option Access By User
```

```
List Options by Parents and Use
```

```
Build Primary Menu Trees
```

```
Fix Option File Pointers
```

```
Help Processor ...
```

```
OPED Screen-based Option Editor
```

```

Display Menus and Options ...
Out-Of-Order Set Management ...

Show Users With Selected Primary or Secondary Menu

Se

Select OPTION to edit: BLRA Lab E-SIG Menu
  Located in the BLRA (IHS LAB ES) namespace.
  Are yo
  (Yes)
    OPTION MENU TEXT: Lab E-S
NAME: BLRA Lab E-SIG Menu//
MENU TEXT: Lab E-SIG Menu  Replace
PACKAGE: IHS LAB ES//
OUT OF
LOCK:
REVERSE/NEGAT
DESCRIPTION:
  1>This menu contains options for the laboratory electronic signature
capab
  2>
EDIT Option:
TYPE: M
HEADER:
ENTRY ACTION:
EXIT ACTION:
Select ITEM: BLRA LAB ES PHYSICIANS                Enter/Edit/Re-activate ESIG Lab
Physicians **NEW**
  Are you adding
)? No//      (Yes)
  MENU SYNONYM:
  SYNONYM: EDT//
  DISPLAY ORDER:
Select ITEM: BLRA LAB REVIEW/SIGN RESULTS            Review/Sign Lab Results
**NEW**
  Are you adding 'BLRA LAB REVIEW/SIGN RESULTS' as
    a new MENU (the 2N
  MENU SYNONYM:
  SYNONYM: REV//
  DISPLAY ORDER:
Select ITEM: BLRA LAB SIGNED RPT                    Signed Lab Results Report **NEW**
  Are you addi
No// Y  (Yes)
  MENU SYNONYM:
  SYNONYM: SGN//
  DISPLAY ORDER:
Select ITEM: BLRA LAB DELINQUENT RPT                Delinquent Lab Results **NEW**
  Are you adding '
N)? No// Y  (Yes)
  MENU SYNONYM:
  SYNONYM: DEL//
  DISPLAY ORD
Select ITEM:
CREATOR: RPM
HELP FRAME
PRIORITY:
Select TIMES PROHIBI

```

```

RESTRICT DEVICES?.
Select PERMITTED DEVICE:

Select OPTION to edit: LRMENU           Laboratory DHCP Menu
NAME: LRMENU//
MENU TEXT: Laboratory D
PACKAGE: LAB SERVICE//
OUT OF
LOCK:
REVERSE/NEGAT
DESCRIPTION:
  1>Main labo
EDIT Option:
TYPE: me
HEADER:
ENTRY ACTION: D ^LRPARAM/
EXIT ACTION: D ^LRKILL//
Select ITEM: LA7S MAIN ME
  ITEM: LA7S MAIN
  SYNONYM: LSM//
  DISPLAY ORDER:
Select ITEM: BLRA Lab E-SIG Menu           Lab E-SIG Menu

No// Y (Yes)
  MENU SYNONYM:
  SYNONYM: SIG//
  DISPLAY ORD
Select ITEM:
CREATOR: POS
HELP FRAME
PRIORITY:
Select TIMES PROHIBI
Select TIME PERIOD:
RESTRICT DEVICES?:
Se

Select OPTION to edit:

```

5.3.1 Allocating Option to the User's Toolbox

To help the data entry clerk, the Enter/Edit Participating Lab Physicians ****NEW**** [BLRA LAB ES PHYSICIANS] option was added to the [BLRA Lab E-SIG Menu]. Otherwise this new option can be added to the User's Toolbox. This option gives the participating physicians the flexibility to enter and/or edit their own surrogates.

Be sure that the Electronic Signature code Edit [XUSESIG] option is defined for the User's Toolbox.

```

Select OPTION to edit: XUSERTOOLS                                User's Toolbox
NAME: XUSERTOOLS//
MENU TEXT: User's Toolbox//
PACKAGE:
OUT OF ORDER MESSAGE:
LOCK:
REVERSE/NEGATIVE LOCK:
DESCRIPTION:
  1>Several different utilities designed for the average user.
EDIT Option:
TYPE: menu//
HEADER:
ENTRY ACTION:
EXIT ACTION:
Select ITEM: XU SWITCH UCI// BLRA LAB ES PHYSICIANS                Enter/Edit
Participating Lab Physicians **NEW**
  Are you adding 'BLRA LAB ES PHYSICIANS' as a new MENU (the 9TH for this
OPTION)? No// Y (Yes)
  MENU SYNONYM:
  SYNONYM:
  DISPLAY ORDER:
Select ITEM: ^

```

5.4 Allocating Options to Maintenance Users

Two menu options must be added to the menu of the person who will be maintaining the participating physicians file. Please assign these new menu options to the appropriate menu.

- BLRA LAB ES PHYSICIANS
- BLRA LAB ES INACTIVATE PHYS

```

Select OPTION to edit: [Menu Name As Noted In Example Above]
NAME: APCD LTM MENU//
MENU TEXT: PCC Local Table Maintenance  Replace
PACKAGE:
OUT OF ORDER MESSAGE:
LOCK:
REVERSE/NEGATIVE LOCK:
DESCRIPTION:
  1>Menu of IHS 'table' or file maintenance options.
EDIT Option:
TYPE: menu//
HEADER: S APCDTEXT="T" D ^APCDBAN  Replace
ENTRY ACTION: S APCDDUZ=DUZ(0) S DUZ(0)="@" S APCDTEXT="T" D ^APCDBAN
Replace
EXIT ACTION: S DUZ(0)=APCDDUZ//
Select ITEM: AVA PROVIDER ADD/EDIT//BLRA LAB ES INACTIVATE PHYS
Inactivate Lab ESIG Physicians **NEW**
  Are you adding 'BLRA LAB ES INACTIVATE PHYS' as a new MENU (the 7TH for this
OPTION)? No// Y (Yes)
  MENU SYNONYM:
  SYNONYM:
  DISPLAY ORDER:
Select ITEM: BLRA LAB ES PHYSICIANS                                Enter/Edit/Re-activate Lab ESIG

```

```
Physicians **NEW**  
Are you adding 'BLRA LAB ES PHYSICIANS' as a new MENU (the 8TH for this  
OPTION)? No// Y (Yes)  
  
MENU SYNONYM:  
SYNONYM:  
DISPLAY ORD
```

5.5 Allocating Options to Lab Supervisor

There are four menu options that are exported with this patch that must be assigned to the appropriate person. These are sensitive and important options and the person who will be 'in charge' of these options must be selected carefully and assigned the BLRAZLAB security key as they deal with monitoring user utilization of lab menu options, archiving of lab data, and purging of expired surrogate physicians. The site manager may wish to assign these options to his/herself.

- BLRA LAB AUDIT REPORT
- BLRA PARAMETERS ENTER/EDIT
- BLRA LAB AUDIT ARCHIVE**
- BLRA LAB ES SURR PHYS PURG**

**These options should be scheduled to run through TaskMan. See section 6.0 of this manual for more information about scheduling options.

5.5.1 Turning on the Electronic Signature Plug-In

After all the previous post-install procedures have been done, the application must be turned on in the following manner.

```
>D P^DI
VA FileMan 21.0

Select OPTION:      ENTER OR EDIT FILE ENTRIES

INPUT TO WHAT FILE:  BLR MASTER CONTROL
EDIT WHICH FILED: ALL// LAB APPLICATION PLUG-IN      (multiple)
  THEN EDIT FIELD:

Select BLR MASTER CONTROL SITE:  (Your Site)
Select LAB APPLICATION PLUG-IN: LR*5.2*1013
  Are you adding 'LR*5.2*1013' as
a new LAB APPLICATION PLUG-IN (the 1st for this BLR MASTER CONTROL)?
No//Y (Yes)
  PLUG-IN ON/OFF?: 1    ON
Select LAB APPLICATION PLUG-IN: <ENTER>

Select BLR MASTER CONTROL SITE: <ENTER>

Select OPTION:
```

Note: If this is a second installation of patch 13 (Electronic Signature), you will have to delete the previous entry and reenter the LR*5.2*1013 plug-in, making sure that you choose the second one listed.

5.5.2 Turning on Auditing

When running the Archive audit data [BLRA LAB AUDIT ARCHIVE] option, data will be automatically purged when the archive file has successfully been created. The BLRA LAB AUDIT ARCHIVE option is recommended for scheduling through TaskMan.

If the site would like the audit and archive functionality to track user access of lab data, the Lab ESIG audit and archive functions must be turned on at the site. The following steps must be used to turn on and utilize the audit and archive functionality of the Lab ESIG software:

1. Set Lab Parameters using the option "Enter/Edit Lab Parameters"
2. Select the LAB ESIG parameters to edit
3. Turn-on auditing
4. Select number of days to keep audit data in the system
5. Enter the location (directory pathname) to store archives of the audit data
6. After entering all parameters, schedule the BLRA LAB AUDIT ARCHIVE option in TaskMan.

Note: It is recommended that the scheduling of the archive of audit data have a frequency of at least once a week, if not more frequently. Depending on your site and user activity in the Lab package it may be necessary to run this option at least once a day.

7. Once the auditing and archive functions are set in motion, the BLRA LAB AUDIT RPT option can be used by designated personnel with the BLRAZLAB security key to run audit reports and view the user activity and access in the Lab package.

The option BLRA PARAMETERS ENTER/EDIT must be used to setup the archive parameters before the option BLRA LAB AUDIT ARCHIVE can be scheduled to run in TaskMan.

```

Select OPTION NAME: BLRA PARAMETERS ENTER/EDIT                               Lab Parameters Enter/Edit
Lab Parameters Enter/Edit

Select BLRA LAB PARAMETERS LAB FILE: ?
Answer with BLRA LAB PARAMETERS LAB FILE:
LAB ESIG AUDIT

You may enter a new BLRA LAB PARAMETERS, i
Answer must be 1-20 characters in length.
Se

THE CURRENT LAB ESIG PARAMETERS ARE:
LAB FILE: LAB ESIG AUDIT                                AUDIT ON?: OFF
NUMBER OF DAYS TO

Would you like to edi
AU

Please enter the number of days to keep the
Select from 1 to 7 days (def
NU

Enter a directory path to which the archiving will store the Audi
* Warning! The d
FI

Enter NT directory pathnam
FI

*** THE LAB ESIG AUDITING AND ARCHIVING IS TURNED ON ***
*** PLEASE SCHEDULE THE 'BLRA LAB ARCHIVE' OPTION IN TASKMAN ***

```

5.6 Adding Users to Mail Groups and Bulletins

The RPMS Lab Electronic Signature Enhancement V. 5.2, Patch 13 includes a Mail Group. Please add the appropriate users to this Mail Group.

NAME: BLR APPLICATION PLUGIN WARNING

DESCRIPTION: Members of this group will receive a warning if something is wrong with a plug-in application's setup or installation.

NAME: BLR APPLICATION PLUGIN WARNING

SUBJECT: PLUG-IN NOT INSTALLED OR TURNED ON PROPERLY

MAIL GROUP: BLR APPLICATION PLUGIN WARNING

DESCRIPTION: If a trigger within the LR namespace calls a plug-in which is not installed, incompletely installed or something needed for the plug-in to run properly is missing, this message will be sent.

6.0 Scheduling Jobs In TaskMan

Included in the Lab Electronic Signature software are two options that will need to be scheduled in TaskMan.

- BLRA LAB AUDIT ARCHIVE
- BLRA LAB ES SURR PHYS PURG

```

Select Systems Manager Menu Option:
    Core Applications ...
    Device Management ...
    FM      VA FileMan ...
            Manage Mailman ...
            Menu Management ...
            Programmer Options ...
            Operations Management ...
            Spool Management ...
            System Security ...
            Taskman Management ...
            User Management ...
            Application Utilities ...
            Capacity Management ...

Select Systems Manager Menu Option: TASK                Taskman Management

    Schedule/Unschedule Options
    One-time Option Queue
    Taskman Management Utilities ...
    List Tasks
    Dequeue Tasks
    Requeue Tasks
    Delete Tasks
    Print Options that are Scheduled to run
    Cleanup Task List
    Print Options Recommended for Queueing

Select Taskman Management Option: SCHedule/Unschedule Options

Select OPTION to schedule or reschedule: BLRA LAB AUDIT ARCHIVE      Archive
Lab ESIG Audit Data
Are you adding 'BLRA LAB AUDIT ARCHIVE' as
a new OPTION SCHEDULING (the 21ST)? No// Y (Yes)

                                Edit Option Schedule
Option Name: BLRA LAB AUDIT ARCHIVE
Menu Text: Archive Lab ESIG Audit Data                TASK ID:

-----
QUEUED TO RUN AT WHAT TIME: MAY 14,2002@20:00

DEVICE FOR QUEUED JOB OUTPUT:

QUEUED TO RUN ON VOLUME SET:

RESCHEDULING FREQUENCY: 1D  <Enter how often option should be run, 1D

```

stands for once a day>

TASK PARAMETERS:

SPECIAL QUEUEING:

Exit Save Next Page Refresh

Select OPTION to schedule or reschedule: BLRA LAB AUDIT ARCHIVE Archive
Lab ESIG Audit Data

...OK? Yes// **N** (No)

BLRA

1 BLRA LAB AUDIT REPORT Print Lab Audit Report
2 BLRA LAB DELINQUENT RPT Delinquent Lab Results **NEW**
3 BLRA LAB ES INACTIVATE PHYS Inactivate Lab ESIG Physicians **N

EW**

4 BLRA LAB ES PHYSICIANS Enter/Edit/Re-activate Lab ESIG Physi
ans **NEW**

5 BLRA LAB ES SURR PHYS PURGE Purge expired surrogate physicians
for Lab ESIG

Press <RETURN> to see more, '^' to exit this list, OR

CHOOSE 1-5: **5 BLRA LAB ES SURR PHYS PURGE** Purge expired surrogate
physicians for Lab ESIG

Are you adding 'BLRA LAB ES SURR PHYS PURGE' as
a new OPTION SCHEDULING (the 22ND)? No// **Y** (Yes)

Edit Option Schedule

Option Name: BLRA LAB ES SURR PHYS PURGE

Menu Text: Purge expired surrogate physicia

TASK ID:

QUEUED TO RUN AT WHAT TIME: **MAY 14,2002@20:30**

DEVICE FOR QUEUED JOB OUTPUT:

QUEUED TO RUN ON VOLUME SET:

RESCHEDULING FREQUENCY: **1D** <Enter how often option should be run, 1D
stands for once a day>

TASK PARAMETERS:

SPECIAL QUEUEING:

Exit Save Next Page Refresh

Enter a command or '^' followed by a caption to jump to a specific field.

Select OPTION to schedule or reschedule:

7.0 Contact Information

If you have any questions or comments regarding this distribution, please contact the ITSC Help Desk by:

Phone: (505) 248-4371 or
(888) 830-7280

Fax: (505) 248-4199

Web: <http://www.rpms.ihs.gov/TechSupp.asp>

Email: RPMSHelp@mail.ihs.gov

8.0 Appendix A: Patch 13 Lab Functional Changes

1. An audit subsystem was added to the BLR namespace to provide a more robust tracking of the BLR process. This audit can be turned on and off depending on the need for additional debugging capabilities. One field was added to the BLR MASTER CONTROL file to turn the audit on or off – (#1) TAKE SNAPSHOT. This is only for programmer use.
2. Four fields were deleted from the BLR MASTER CONTROL file. Per Mike Loughran they were no longer in use and not needed.
 - (#1101) GUI LAB ORDER SEND PAT
 - (#1102) GUI LAB ORDER LAB COLLECT
 - (#1103) GUI LAB ORDER WARD COLLECT
 - (#1104) GUI LAB MULTIPURPOSE ACC

These fields will be deleted in a post install routine. BLRPOST

3. Because of the nature of the BLR link process BLR caused errors can accumulate to the point that, if the link is not monitored, <DKFUL> errors result. The error log fills up the MGR UCI. To prevent this from happening a BLR ERROR MONITOR has been added to monitor BLR errors in the ^%ZTER global. A numeric field was added ERROR OVERFLOW LIMIT #2 in the BLR MASTER CONTROL FILE. The site manager can set this field to the maximum number of errors allowed to accumulate before a warning is displayed and the link shuts itself down. If no entry is made by the site manager the default error limit is 5.
4. In previous versions the field LAB LOG TRANSACTION could be changed from YES to NO after going “live”. This caused problems because the system could not process ‘events’ retroactively. It has been changed so that once set it cannot be changed via the menu options.
5. Because of the arrival of so called “hybrid” or “plug-in” packages being added to the existing Lab package, a central location of “package parameters” has been created to control “hybrid” behavior. A multiple has been created in the BLR MASTER CONTROL file at the subscript 1 level.

```
^BLRSITE(D0,1,0)=^9009029.02101P^^ (#2101) LAB APPLICATION PLUG-IN
^BLRSITE(D0,1,D1,0)= (#.01) LAB APPLICATION PLUG-IN [1P] ^ (#1) PLUG-IN
==>ON/OFF? [2S] ^
```

6. A new function \$\$ADDON^BLRUTIL will be called by all “hybrids” to see if the parent package has the proper parameters, routines and installations needed to operate. The parent application will then allow the “hybrid”

permission to run. The function will check to see if the KIDS install completed successfully as well as check to see if all routines that's KIDS installed are still there. It will also check to see if the "hybrid" has been turned on. More checks may be added as needed.

7. A field has been added to the LABORATORY SITE file 69.9 called DAYS TO ORDER AHEAD #618. This allows the site to set the days ahead that an order can be made. The variable LRDAHEAD is set to this value in LRPARAM and is checked at various points in the ordering process. If the field is not set the default is 366
8. Comments for "CH" subscript tests (hematology, urinalysis, chemistry) now go to the IHS LOG TRANSACTION file (field #3001) and to PCC as well.
9. Because of the addition of item 4 a new option BLR CLEAR LINK ERRORS has been added. Once the error log fills up to the number of errors set in the ERROR OVERFLOW LIMIT in BLR MASTER CONTROL FILE a warning will be issued to the screen to have the user notify their site manager. (We will have to work out a way to alert the appropriate users via mailman as well) Once the appropriate action is taken to fix the error. The error log will have to be cleared of all BLR link errors to allow the link to restart. The BLR CLEAR LINK ERRORS option will allow this. This option will have a lock BLRZMGR. A programmer can also clear the log by calling CLRERRS^BLRUTIL(+SH)
10. A change to the LRORD1 Routine eliminates asking for a collection sample in MICRO.
11. The following fields in the BLR MASTER CONTROL file are now audited and their read, delete and write access are now set to "LI"
 - .02 LAB LOG TRANSACTION
 - .03 LAB LOG TO PCC
 - .04 LOG PAT DATA ONLY
 - .05 DEFAULT DIRECTORY PATH
 - .08 DAYS TO KEEP TRANSACTIONS
 - .09 STOP PROCESSOR
 - 1 TAKE SNAPSHOT
 - 2 ERROR OVERFLOW LIMIT
 - 2101 LAB APPLICATION PLUG-IN (multiple)
 - .01 LAB APPLICATION PLUG-IN
 - 1 PLUG-IN ON/OFF?

12. Two new mail groups and two new bulletins have been added to the package.

Mail Groups:**BLR APPLICATION PLUG-IN WARNING**

Users who should receive a warning concerning a problem with a “plug-in” installation should be added to this group.

BLR ERROR OVERFLOW WARNING

Users who should receive a warning concerning a problem with the BLR PCC link causing errors to accumulate in the error log should be added to this group.

BULLETINS:**BLR APPLICATION PLUG-IN WARNING**

The bulletin users in the LR APPLICATION PLUG-IN WARNING mail group will receive.

BLR ERROR OVERFLOW WARNING

The bulletin users in the LR ERROR OVERFLOW WARNING mail group will receive.

13. All EXECUTE CODES # 1 in file EXECUTE CODES # 62.07 with a “/”_DUZ_ as a default have been replaced with a “///”_DUZ_ so the default is the user name not the NEW PERSON IEN.

The following were changed:

- BACTERIOLOGY1
- VIROLOGY
- SIC/SBS
- ANTIBIOTIC LEVEL
- MIC/MBC
- GRAM STAIN
- BACT SMEAR/PREP
- ALT MYCOLOGY SMEAR/PREP
- AFB REMARKS
- SPUTUM SCREEN
- URINE SCREEN
- MYCOLOGY SMEAR/PREP1
- PARASITE SMEAR/PREP
- URINE SCREEN
- BACTI W/GRAM STAIN

14. Fixed <UNDEF> problem when deleting PRELIMINARY BACT COMMENTS. This no longer occurs. The fix was to add Q:’\$G(Y(0)) to the EXECUTE CODE field in file 62.07 before using it:
15. When using Fast Bypass and Bypass options and only entering partial results the test did not appear as pending or appear on the incomplete test report. Changes have been made to fix this.
16. There was a problem with formatting of the GENERAL LAB DATA DISPLAY [LRGEN] option that made the display difficult to read. This has been fixed.
17. There was problem with tests successfully being entered into the lab transaction file but not going over to PCC. There were no errors or messages generated by the link. The reason was the INSTITUTION field was not populated in the HOSPITAL LOCATION file for the location specified upon entry at the PATIENT LOCATION: prompt. This situation will now create an error message and enter the error in the PCC ERROR FLAG field of the IHS LAB TRANSACTION file.
18. There was problem with tests successfully being entered into the lab transaction file but not going over to PCC. There were no errors or messages generated by the link. The reason was the ABBREVIATION field was not populated in the HOSPITAL LOCATION file for the location specified upon entry at the PATIENT LOCATION: prompt. This situation will now create an error message and enter the error in the PCC ERROR FLAG field of the IHS LAB TRANSACTION file.
19. The field .05 *DEFAULT DIRECTORY PATH in BLR MASTER CONTROL #9009029 file has been marked as obsolete. It will be dropped at a future date. If any local applications access this field it is suggested an alternative be found
20. The following options menus have been deleted because they are not used:

BLR EDIT HIS LAB CPT REVIEW	Enter/edit HIS LAB Review Code File
BLR EXECUTE IMPORT PROCESS	Execute IMPORT Process
BLR IMPORT FILE RESET	Reset Import for Reprocessing
BLR IMPORT MENU	Import Lab Data Menu
BLR MAIN EDIT MENU	IHS Lab Main Edit Menu
BLR IMPORT EDIT	Edit BLR Import File
21. There was a recurring problem where entries in the file 62.3 LAB CONTROL NAMES were being deleted. These should never be deleted. If the option “Count Accessioned tests” was used and the lab control entry for the particular accession was deleted an Undefined error occurred. A change was

made to the routine LRUPACA to substitute “DELETED CONTROL” in cases where the entry is undefined and therefore has been deleted. Also the file LAB CONTROL NAME data dictionary will be modified to not allow deletion of a control name.

22. A problem showed up during LOINC testing where if a required test was deleted from a panel the parent in the log was not updated as resulted even when all required tests were resulted. Changes were made in the DELETE^BLRTN subroutine.
23. A problem reported by Santa Fe involved the execute code called TDM which didn't work. If 'Dose expected to be at PEAK level' was entered it would not show up on the printed order. The reason was that a check was made on the version of OE/RR currently installed. Since IHS doesn't use OE/RR we took out this conditional check. Routine LREXECU changed at +9
24. When testing the LOINC patch it was found that the lab RESULT field was being chopped to ten characters before being sent to the V LAB file. There was no comment as to why this was being done. Since a result of 30 to 50 chars is needed in cases where a send out is involved. The result field is usually a free text e.g. “SEE QUEST REPORT “, “SEE REPORT IN MEDICAL RECORDS”, “TESTING PERFORMED AT LOCAL HOSPITAL, SEE REPORT” Change made at BLRLINK3+30
25. Changed routine LRWU5 to allow entry of negative numbers for minimum and maximum values for the DATA NAME of a test. This was reported by Verna Kuka. It was also found in the VA Patch log. VA PATCH 206 SEQ 194
26. A new execute code called “DIAGNOSIS” has been added to the EXECUTE CODE file. The code can be attached to a test as a “REQUIRED COMMENT” in file #60. This code prompts the person ordering the test to enter a diagnosis or “sign/symptom” for the test. The “sign/symptom” will be passed to PCC (V LAB) as a comment.

9.0 Appendix B: All Patch 13 Lab Changes

1. A group of routines (blrorx*) were found which had no executable code within them. They were dummy subroutines, which were called at various points throughout the LR namespace.

Mike Louhgran had no idea why they were there. It was found that these were useless calls and therefore they were removed. They were BLRORX*.

2. An audit subsystem was added to the BLR namespace to provide a more robust tracking of the BLR process. This audit can be turned on and off depending on the need for additional debugging capabilities. One field was added to the BLR MASTER CONTROL file to turn the audit on or off – (#1) TAKE SNAPSHOT. This is only for programmer use.
3. Four fields were deleted from the BLR MASTER CONTROL file. Per Mike Loughran they were no longer in use and not needed.
 - (#1101) GUI LAB ORDER SEND PAT
 - (#1102) GUI LAB ORDER LAB COLLECT
 - (#1103) GUI LAB ORDER WARD COLLECT
 - (#1104) GUI LAB MULTIPURPOSE ACC

These fields will be deleted in a post install routine. BLRPOST

4. Because of the nature of the BLR link process BLR caused errors can accumulate to the point that, if the link is not monitored, <DKFUL> errors result. The error log fills up the MGR UCI. To prevent this from happening a BLR ERROR MONITOR has been added to monitor BLR errors in the ^%ZTER global. A numeric field was added ERROR OVERFLOW LIMIT #2 in the BLR MASTER CONTROL FILE. The site manager can set this field to the maximum number of errors allowed to accumulate before a warning is displayed and the link shuts itself down. If no entry is made by the site manager the default error limit is 5
5. In previous versions the field LAB LOG TRANSACTION could be changed from YES to NO after going “live”. This caused problems because the system could not process ‘events’ retroactively. It has been changed so that once set it cannot be changed via the menu options.
6. Because of the arrival of so called “hybrid” or “plug-in” packages being added to the existing Lab package, a central location of “package parameters” has been created to control “hybrid” behavior. A multiple has been created in the BLR MASTER CONTROL file at the subscript 1 level.

```

^BLRSITE(D0,1,0)=^9009029.02101P^^ (#2101) LAB APPLICATION PLUG-IN
^BLRSITE(D0,1,D1,0)= (#.01) LAB APPLICATION PLUG-IN [1P] ^ (#1) PLUG-IN
==>ON/OFF? [2S] ^

```

7. A new function \$\$ADDON^BLRUTIL will be called by all “hybrids” to see if the parent package has the proper parameters, routines and installations needed to operate. The parent application will then allow the “hybrid” permission to run. The function will check to see if the KIDS install completed successfully as well as check to see if all routines that’s KIDS installed are still there. It will also check to see if the “hybrid” has been turned on. More checks may be added as needed.
8. A field has been added to the LABORATORY SITE file 69.9 called DAYS TO ORDER AHEAD #618. This allows the site to set the days ahead that an order can be made. The variable LRDAHEAD is set to this value in LRPARAM and is checked at various points in the ordering process. If the field is not set the default is 366
9. Comments for “CH” subscript tests (hematology, urinalysis, chemistry) now go to the IHS LOG TRANSACTION file (field #3001) and to PCC as well.
10. Because of the addition of item 4 a new option BLR CLEAR LINK ERRORS has been added. Once the error log fills up to the number of errors set in the ERROR OVERFLOW LIMIT in BLR MASTER CONTROL FILE a warning will be issued to the screen to have the user notify their site manager. (We will have to work out a way to alert the appropriate users via mailman as well) Once the appropriate action is taken to fix the error. The error log will have to be cleared of all BLR link errors to allow the link to restart. The BLR CLEAR LINK ERRORS option will allow this. This option will have a lock BLRZMGR. A programmer can also clear the log by calling CLRERRS^BLRUTIL(+H)
11. A change to the LRORD1 Routine eliminates asking for a collection sample in MICRO.
12. The following fields in the BLR MASTER CONTROL file are now audited and their read, delete and write access are now set to “LI”

.02	LAB LOG TRANSACTION
.03	LAB LOG TO PCC
.04	LOG PAT DATA ONLY
.05	DEFAULT DIRECTORY PATH
.08	DAYS TO KEEP TRANSACTIONS
.09	STOP PROCESSOR
1	TAKE SNAPSHOTS
2	ERROR OVERFLOW LIMIT

2101	LAB APPLICATION PLUG-IN (multiple)
.01	LAB APPLICATION PLUG-IN
1	PLUG-IN ON/OFF?

13. Two new mail groups and two new bulletins have been added to the package.

Mail Groups:

BLR APPLICATION PLUG-IN WARNING

Users who should receive a warning concerning a problem with a “plug-in” installation should be added to this group.

BLR ERROR OVERFLOW WARNING

Users who should receive a warning concerning a problem with the BLR PCC link causing errors to accumulate in the error log should be added to this group.

BULLETINS:

BLR APPLICATION PLUG-IN WARNING

The bulletin users in the LR APPLICATION PLUG-IN WARNING mail group will receive.

BLR ERROR OVERFLOW WARNING

The bulletin users in the LR ERROR OVERFLOW WARNING mail group will receive.

14. All EXECUTE CODES # 1 in file EXECUTE CODES # 62.07 with a “/”_DUZ_ as a default have been replaced with a “///_DUZ_ so the default is the user name not the NEW PERSON IEN.

The following were changed:

- BACTERIOLOGY1
- VIROLOGY
- SIC/SBS
- ANTIBIOTIC LEVEL
- MIC/MBC
- GRAM STAIN
- BACT SMEAR/PREP
- ALT MYCOLOGY SMEAR/PREP
- AFB REMARKS
- SPUTUM SCREEN
- URINE SCREEN
- MYCOLOGY SMEAR/PREP1
- PARASITE SMEAR/PREP

- URINE SCREEN
- BACTI W/GRAM STAIN

15. MICRO comments and other fields do NOT go over to the HIS TRANSACTION LOG. This is being worked on.

16. Fixed <UNDEF> problem when deleting PRELIMINARY BACT COMMENTS. This no longer occurs. The fix was to add Q:'\$G(Y(0)) to the EXECUTE CODE field in file 62.07 before using it:

Original line:

```
S DR="11.55/////_DUZ_";.055;1;.05;.99;11.6;11.5;S
LRSPEC=$P(Y(0),U,5),Y=$S(LRSPEC=71:11.57,LRSPEC=360:11.58,1:0);11.57;S
Y=0;11.58",LREND=0 D ^DIE S:$D(Y) LREND=1 Q:$D(Y) D ^LRMIBUG Q:LREND S
DR="13;11" D ^DIE Q
```

Modified line:

```
SDR="11.55/////_DUZ_";.055;1;.05;.99;11.6;11.5;Q:'$G(Y(0)) S
LRSPEC=$P(Y(0),U,5),Y=$S(LRSPEC=71:11.57,LRSPEC=360:11.58,1:0);11.57;S
Y=0;11.58",LREND=0 D ^DIE S:$D(Y) LREND=1 Q:$D(Y) D ^LRMIBUG Q:LREND S
DR="13;11" D ^DIE Q
```

17. When using Fast Bypass and Bypass options and only entering partial results the test did not appear as pending or appear on the incomplete test report. Changes have been made to fix this.

18. There was a recurrent error in routine BLRTN in subroutine RES1^BLRTN where BLRDUZ would be undefined. This seemed to occur in multidivisional sites. It is suspected that when a test is accessioned by one division and then resulted by another this error occurs. Although not the final solution, the interim fix is to set BLRDUZ to DUZ if it is undefined. This allows the panel to be processed and sent to PCC.

19. There was a problem with formatting of the GENERAL LAB DATA DISPLAY [LRGEN] option which made the display difficult to read. This has been fixed

20. There was problem with tests successfully being entered into the lab transaction file but not going over to PCC. There were no errors or messages generated by the link. The reason was the INSTITUTION field was not populated in the HOSPITAL LOCATION file for the location specified upon entry at the PATIENT LOCATION: prompt. This situation will now create an error message and enter the error in the PCC ERROR FLAG field of the IHS LAB TRANSACTION file.

21. There was problem with tests successfully being entered into the lab transaction file but not going over to PCC. There were no errors or messages

generated by the link. The reason was the ABBREVIATION field was not populated in the HOSPITAL LOCATION file for the location specified upon entry at the PATIENT LOCATION: prompt. This situation will now create an error message and enter the error in the PCC ERROR FLAG field of the IHS LAB TRANSACTION file.

22. The field .05 *DEFAULT DIRECTORY PATH in BLR MASTER CONTROL #9009029 file has been marked as obsolete. It will be dropped at a future date. If any local applications access this field it is suggested an alternative be found

23. The following options menus have been deleted because they are not used:

BLR EDIT HIS LAB CPT REVIEW	Enter/edit HIS LAB Review Code File
BLR EXECUTE IMPORT PROCESS	Execute IMPORT Process
BLR IMPORT FILE RESET	Reset Import for Reprocessing
BLR IMPORT MENU	Import Lab Data Menu
BLR MAIN EDIT MENU	IHS Lab Main Edit Menu
BLR IMPORT EDIT	Edit BLR Import File

24. There was a recurring problem where entries in the file 62.3 LAB CONTROL NAMES were being deleted. These should never be deleted. If the option "Count Accessioned tests" was used and the lab control entry for the particular accession was deleted an Undefined error occurred. A change was made to the routine LRUPACA to substitute "DELETED CONTROL" in cases where the entry is undefined and therefore has been deleted. Also the file LAB CONTROL NAME data dictionary will be modified to not allow deletion of a control name
25. A problem showed up during LOINC testing where if a required test was deleted from a panel the parent in the log was not updated as resulted even when all required tests were resulted. Changes were made in the DELETE^BLRTN subroutine.
26. A problem reported by Santa Fe involved the execute code called TDM which didn't work. If 'Dose expected to be at PEAK level' was entered it would not show up on the printed order. The reason was that a check was made on the version of OE/RR currently installed. Since IHS doesn't use OE/RR we took out this conditional check. Routine LREXECU changed at +9
27. When testing the LOINC patch it was found that the lab RESULT field was being chopped to ten characters before being sent to the V LAB file. There was no comment as to why this was being done. Since a result of 30 to 50 chars is needed in cases where a send out is involved. The result field is usually a free text e.g. "SEE QUEST REPORT ", "SEE REPORT IN

MEDICAL RECORDS”, ”TESTING PERFORMED AT LOCAL HOSPITAL, SEE REPORT” Change made at BLRLINK3+30

28. Changed routine LRWU5 to allow entry of negative numbers for minimum and maximum values for the DATA NAME of a test. This was reported by Verna Kuka. It was also found in the VA Patch log. VA PATCH 206 SEQ 194
29. A new execute code called “DIAGNOSIS” has been added to the EXECUTE CODE file. The code can be attached to a test as a “REQUIRED COMMENT” in file #60. This code prompts the person ordering the test to enter a diagnosis or “sign/symptom” for the test. The “sign/symptom” will be passed to PCC (V LAB) as a comment